

WHAT IS CLAIMED IS:

Sub A/S  
1. A process for the production of a cereal wort or beer having a high content of soluble  $\beta$ -glucan from a cereal or mixture of cereals in which a cereal employed in the process essentially lacks  $\beta$ -glucanase activity.

2. The process of claim 1 for the production of a cereal beer having a high content of soluble  $\beta$ -glucan from a cereal or mixture of cereals comprising the following steps:

a. forming an aqueous cereal slurry containing from 10% to 30% by weight of at least one wet or dry milled cereal which essentially lacks  $\beta$ -glucanase activity;

b. mashing the slurry at a temperature above 50°C in the presence of at least one starch degrading enzyme and, optionally, at least one protein degrading enzyme;

c. cooling to a temperature below 50°C;

d. removing insoluble material to form a

wort;

e. boiling the wort with hops at conditions sufficient to destroy all enzymatic activity, thereby forming a boiled wort;

f. cooling the boiled wort to room temperature or lower;

g. adding yeast to the boiled wort; and

h. fermenting the mixture to produce a cereal beer having a high content of soluble  $\beta$ -glucan.

3. The process of claim 2, including the step of combining boiled malt wort with said cereal wort prior to boiling.

4. The process of claim 2, wherein the cereal is oats or barley or a mixture thereof.

5. The process of claim 2, wherein the cereal is a malted cereal selected from oats, barley and a mixture thereof, the cereal having been heat treated to destroy essentially all  $\beta$ -glucanase activity.

6. The process of claim 2, including the step of heat treating the cereal sufficiently to inactivate essentially all  $\beta$ -glucanase contained therein.

7. The process of claim 2 wherein the mashing temperature is from 54 to 65°C.

8. The process of claim 2, wherein the process conditions are controlled such that more than 50% of soluble  $\beta$ -glucan contained in the cereal is preserved in the final product.

9. The process of claim 2, wherein the starch degrading enzyme is amylase, optionally in combination with pullulanase or amyloglucosidase or both.

10. A cereal wort or beer containing more than 0.2% by weight of soluble  $\beta$ -glucan.

11. The cereal wort or beer of claim 10, containing more than 0.3% of soluble  $\beta$ -glucan.

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12. The cereal wort or beer of claim 10, containing more than 0.5% of soluble  $\beta$ -glucan.

13. The cereal wort or beer of claim 10 wherein said cereal is at least one member selected from the group consisting of wet milled rolled oats, wet milled rolled barley, wet milled crushed barley, incompletely germinated oats, incompletely germinated barley, heat treated oats flour, heat treated barley flour, said incompletely germinated oats and incompletely germinated barley or a heat treated member of said group.

14. The cereal wort or beer of claim 10, wherein said cereal is oats, barley or a mixture thereof.

15. A cereal beer product comprising the combination of the wort of claim 14 and another wort in which the wort of claim 14 is more than 30% by volume.

16. The cereal beer of claim 15, containing more than 0.2% by weight of soluble  $\beta$ -glucan.

17. The cereal beer of claim 15, containing more than 0.3% by weight of soluble  $\beta$ -glucan.

18. A cereal wort or beer containing more than 0.2% by weight of soluble  $\beta$ -glucan from incompletely germinated oats material.

19. The cereal beer of claim 18 made exclusively from barley, malt and hops, and containing more than 0.2% by weight of soluble  $\beta$ -glucan.

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~~20.~~ A partially germinated cereal grain having amylolytic activity while essentially lacking  $\beta$ -glucanase activity.

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~~21.~~ The grain of claim 21 in which the cereal is barley or oats or a mixture thereof.

add a5

add c4

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